on 24 August 1990 at about 1130 hrs from an aquatic vegetation tank with luxuriant growth of Nymphaea stellata and Hydrilla verticillata. The specimen was captured when it was sitting on a leaf of Nymphaea stellata. The colour pattern was dorsally with irregular spots of black and yellow colour somewhat resembling the colour pattern of a panther's coat. Ventrally: throat and belly creamish yellow-white in colour. Lateral sides yellow.

Snout semi-circular, body slimy and smooth. Snout to vent length was 55 mm and eye to eye width of head was 11 mm. Like *Tomopterna breviceps*, large and shovel-shaped inner metatarsal tubercle was characteristic. Whenever it was lifted it inflated its belly like a balloon.

Besides recording U. systoma in Rajasthan, it is worthy to note that Tomopterna breviceps (Rana breviceps), which is not recorded from Jaipur district, occurred in the Arboretum. Mansukhani and Murthy (1964) have recorded this species only from Jodhpur, Nagaur and Udaipur districts. During an exhaustive survey around Jaipur city, it was collected outside the Arboretum also. A few specimens were collected from cement tanks near Chulgiri Temple on National Highway No. 11.

I thank Dr. Sushil K. Dutta, Utkal University, Bhubaneswar, for identifying the Uperodon systoma and providing information about the species, and A.K. Sarkar, Zoological Survey of India, Calcutta, for identification of Tomopterna breviceps and Bufo stomaticus; Dr. K.K. Sharma, Dept. of Zoology, University of Rajasthan, for encouragement, and my children, Manju, Lalita and Rajesh, who collected most of the frogs and toads including U. systoma.

January 7, 1991

SATISH KUMAR SHARMA

## REFERENCES

- DUTTA S.K. (1988): First Records of *Bufo stomaticus* and *Bufo fergusonii* (Anura: Bufonidae) from Orissa, with comments on their distribution. J. Bombay nat. Hist. Soc. 85 (2): 439-41.
- INGER, R.F. & DUTTA, S.K. (1986): An overview of the Amphibian fauna of India. J. Bombay nat. Hist Soc. 83 (Supp.): 135-46.

# 26. ADDITIONS TO THE LIST OF AMPHIBIAN FAUNA OF GOA

Abdulali and Sekar (1988) reported some amphibian species, including *Rhacophorus malabaricus*, the Malabar gliding frog, from Goa. In July 1989, I collected amphibia from different places in Goa. Species which have not been reported earlier are listed.

## Uperodon globulosum (Gunther, 1864)

1 adult male and 1 adult female (Sanguem). 67.3 mm SVL, 22.4 mm tibia in male. 73.0 mm SVL, 27.8 mm tibia in female. A fold of skin across the shoulder just behind the eyes in both male and female. A median vertebral groove from the skin fold to the vent prominent in female and indistinct in male. Dorsally grey and smooth, dirty white below and smooth. Throat black in the male.

Both the male and female were collected from short grass near a rain water pool. The male was calling sitting at the edge of the pool. The call was  MANSUKHANI. M.R. & MURTHY, T.S.N. (1964): Fauna of Rajasthan, India. Part 6, Amphibia. Rec. Zool. Survey India 62: (1 & 2): 51-60.
SUADUA S K. (1990): Founa and flora of World Forestry.

SHARMA, S.K. (1990): Fauna and flora of World Forestry Arboretum, Jaipur. Bulletin No. 3:1-26.

nasal, loud and can be syllabilised as *oink-oink-oink*. It was very wary and stopped calling even on the slightest movement of the observer. The female which had matured, pigmented, ova was collected while moving towards the male.

### Rana keralensis Dubois, 1980

2 subadult males and 1 adult female (Volpoi). 32.5 and 33.0 mm SVL, tibia 18.8 and 20.8 mm in males. 43.8 mm SVL, tibia 29.6 mm in female. The description by Boulenger (1920) fits the present collection. Tibio-tarsal articulation reaching between the nostril and the eye. Lips with dark vertical bars. The triangular mark between the eyes and an inverted W-shaped mark between the shoulder present in all three specimens. Dorsally brown with darker spots. Ventrally white. Thighs barred.

All the specimens were collected from the bank of a stream in moist deciduous forest. Daniel (1975) collected this species from the banks of small, fast flowing hill streams. According to Annandale (1915) this species is abundant in the Travancore Hills.

#### Rana malabarica Tschudi, 1838

1 adult female (Cotigao). 54.5 mm SVL and 26.9 mm tibia.

This specimen was collected in the open country during rain. Daniel (1975) has also reported that this species preferred forested land though it has been recorded in open country particularly in the breeding season.

#### Rana tigerina Daudin, 1802

12 juveniles (2 Sanguem, 8 Molem, 2 Cotigao). 19.2-35.0 mm SVL, 9.0-18.1 mm tibia. The vertebral streak is very thin but the lateral band from behind the eye is very prominent. Body green above with dark brown spots and markings and pale white below. Toes fully webbed.

All the specimens were collected from grass fields in different localities. The green body colour matched the green of the grass.

Rana syhadrensis Annandale, 1919

8 adult mades and 3 adult females (4 males Volpoi, 4 males Cotigao, 3 females Cotigao). 18.7-20.75 mm SVL, mean 19.53; tibia 8.0-9.65 mm, mean 8.86 in males. 24.05-24.4 mm SVL, mean 24.18; tibia 9.90-10.45 mm, mean 10.17 in females. According to Annandale (1919) this is a dwarf race of Rana limnocharis. The specimens from Goa closely agree with his description. Hindlimbs short. The first finger hardly extends beyond the second. Toes slightly webbed, less so than in Rana limnocharis. The tibio-tarsal articulation reaches the tympanum or posterior border of the eye. A narrow pale mid-dorsal line present. Dorsal surface dark brown with broken longitudinal glandular folds. Ventral surface white. Thighs barred. In all the specimens the lips are pale white without any dark vertical bars. In this respect they differ from Rana limnocharis. Throat black in males. Females with matured pigmented ova.

All the specimens were collected from grass fields with rain water pools in association with *Rana limnocharis* and *Microhyla ornata*. The call was totally different from that of *Rana limnocharis*, resembling the bleating of sheep.

February 11, 1991

A.G. SEKAR

#### REFERENCES

ABDULALI, H. & SEKAR, A.G. (1988): On a small collection of amphibians from Goa. J. Bombay nat. Hist. Soc. 85: 202 -205.

ANNANDALE, N. (1915): Some undescribed tadpoles from the hills of Southern India. Rec. Ind. Mus. 15: 17-23.

ANNANDALE, N. (1919): Some frogs from streams in the Bombay Presidency. Rec. Ind. Mus. 16: 123-124. BOULENGER, G.A. (1920): A monograph on the South Asian, Papuan, Melanesian and Australian frogs of the Genus Rana. Rec. Ind. Mus. 20: 1-223.

DANIEL, J.C. (1975): Field guide to the amphibians of western India. Part 3. J. Bombay nat. Hist. Soc. 72: 506-522.

# 27. NEW RECORD OF A CROAKER, *JOHNIUS COITOR* (HAMILTON-BUCHANAN) (PISCES: SCIAENIDAE) FROM TRIPURA, NORTH-EAST INDIA

(With a text-figure)

During the course of systematic studies on the fish fauna of Tripura, a specimen of a croaker fish was collected from the river Gumti, Tripura. On examination, it proved to be a specimen of *Johnius coitor* (Hamilton-Buchanan). A perusal of existing literature on the fish fauna of north-eastern India including Datta (1977), Lipton (1983-84), Sen (1985), Bhattacharya (1988) and Barman (1988) shows that this fish is not yet known from Tripura or from the other north-eastern states Therefore, the presence of this fish in the rivers of Tripura, extends its range of distribution to north-east India.